

Due to Decreasing Budgets and Rising Operating Costs, the Perkins Township Fire Department  
is Faced with Decreasing Services, or Finding Alternative Economic Resources.

## EXECUTIVE LEADERSHIP

By: Keith J. Wohlever  
Perkins Township Fire Department  
Sandusky, Ohio

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## **Certification Statement**

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another

Signed: \_\_\_\_\_

Keith J. Wohlever

### Abstract

Due to decreasing budgets and rising operating costs, the Perkins Township Fire Department (PTFD) is faced with decreasing staffing if alternative staffing and alternative economic resources are not found. The purpose of this research paper is to provide a study to determine what impact the use of automatic aid will have on staffing provided by the PTFD at emergency responses. Using descriptive methodology, three questions were answered. What are the fire industry staffing guidelines for fire department emergency responses? What are the staffing requirements for emergency responses that career and combination departments of similar size encountered when automatic aid was implemented? What are the implications for staffing at the PTFD for automatic aid emergency responses? Procedures included a literature review, personal interviews, and questionnaire. Results indicated that in order to maintain adequate staffing at emergency responses, the PTFD must move forward to complete several tasks. These tasks include: to increase compatibility, to increase efficiency, and to increase interoperability with their neighboring departments. The results also indicate the staffing levels of the PTFD would increase by the implementation of an automatic aid agreement, and that the department and the residents that they serve may benefit financially by these agreements.

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## **Introduction**

The Perkins Township Fire Department (PTFD) is a combination fire department composed of 25 career and 15 part-time firefighters, down from a total of 49 firefighters in 2007, protecting the rapidly growing community of Perkins Township. Like most departments in the nation, this department is being faced with increasing call volumes; both fire and Emergency Medical Services (EMS), the aging population of the township, decreasing sources of revenue, and increasing costs.

The problem is that due to decreasing budgets and rising operating costs, the PTFD is faced with decreasing staffing if alternative staffing and alternative economic resources are not found. With limited staffing, the effectiveness of the department to mitigate emergencies will be greatly hampered; increasing the risk to firefighter safety and to the public they serve. Decreased staffing will delay early entry, search and rescue activities, and the extinguishment of fires due the federal and state staffing regulations that fire departments must adhere to. These delays in response and fire ground activities will allow the fire to increase in size, increasing the probability of life and property damage, requiring a greater number of fire service personnel to mitigate the emergency.

The purpose of this research paper is to provide a study to determine what impact the use of automatic aid will have on staffing provided by the PTFD at emergency responses. The goal of this research is to evaluate alternative staffing and economic resources that will allow the PTFD to maintain or increase the departments staffing at emergency responses and meet the NFPA and OSHA staffing requirements for fire ground operations; while meeting the department's budgetary restraints.

This applied research project will use descriptive methodology. The paper will be written after an exhaustive library and internet search, a questionnaire of local, state and national fire departments, and personal interviews. The intent is to clarify the national and state staffing regulations for fire department operations and to evaluate alternative resources to meet these staffing levels. Information provided by fire departments from across the United States will be used to identify possible alternative resources that can be used by the PTFD. The following three questions will be addressed in this paper: What are the fire industry staffing guidelines for fire department emergency responses? What are the staffing requirements for emergency responses that career and combination departments of similar size encountered when automatic aid was implemented? What are the implications for staffing at the PTFD for automatic aid emergency responses?

### **Background and Significance**

The PTFD provides the primary fire and EMS service to a suburban area covering roughly 30 square miles. The department maintains two staffed stations with three Advanced Life Support (ALS) transport squads. “The service area is composed of about 40% residential, 40% tourism and mercantile, 15% agricultural, and 5% Federal and State owned properties.” (J. Lamb, personal communication, June 25, 2008). The year round population is approximately 13,500 with a daily increase, from May through October, of between 20 and 50 thousand tourists. This increase is because of the local amusement park, Cedar Point, and the opening of several year round indoor water parks that are now located in the area.

Included in the residential make-up of the community is a large state facility, the Ohio Veterans Home (OVH), a residential institution for retired or ill veterans of the military. This facility is composed of three separate areas; 220 independent living units, 60 assisted living units

and 240 nursing units. Parkvue Retirement Center, located in Perkins Twp., is a three phase senior complex composed of 90 independent living units, 40 assisted living units, and 100 nursing home beds. Concord Care facility with 50 nursing beds is also located in the township. As the budget totals remain stagnant, the township continues to experience a huge growth spurt, with multiple new retail centers, three hotel/indoor water park complexes, three other new hotels, and multiple new residential dwellings. In the last four years the township has issued permits for over 120 single family dwellings, 30 apartment buildings, totaling over 250 units, and more than 51 commercial buildings (Lamb, 2007).

Within the boundaries of Perkins Township, a 6400 acre federal NASA research facility is also located. This research facility, a GM bearing plant, Seal Master, an asphalt sealing plant, and numerous small manufacturing plants comprise the manufacturing base for the township. Also located in the township are several large mercantile areas to serve the residents and tourists that are visiting the area, as well as multiple hotel and motel complexes.

The funding of the department is comprised of two basic components; real estate taxes based on property values and EMS transport billing. “The real estate taxes collected from a Fire/EMS levy generate three-fourths of the department’s budget” (R. Myosky, personal communication, May 2, 2008). The remaining source is a variable amount, based on the number of transports and the percentage of collectible fees. “The Township also collects real estate, bed taxes, and local state government taxes, which are all put into the general operating fund” (B. Mix, personal communication, August 22, 2005). “Until 2004 the fire department budget was supplemented by the Township’s general fund, however in that year the State of Ohio changed its tax law to eliminate the personal property tax charged to industry” (P. Hartung-Kellem, personal communication, June 4, 2005). This change caused a decrease of \$1.2 million in the

total Township budget. The impact was great, with all departments suffering. “In that year the fire department budget lost a \$580,000 contribution from the general fund. Also all expenditures that are encumbered by the Township that are related to the fire department are also now deducted from the fire department budget” (P. Hartung-Kellem, personal communication, June 4, 2007).

In November 2007, the residents of Perkins Township passed a 5 mil replacement levy for fire department operations. According to the assistant Erie County Auditor, this will allow all property to be taxed at the full 5 mils and will show an increase in fire department funds from property taxes of about \$350,000 per year (B. Markley, personal communication, June 16, 2008). However, according to the Erie County Auditor, the net increase experienced by the PTFD will only amount to about \$200,000 due to the elimination of the local tax rebate portion of the Ohio Income Tax by the State of Ohio (J. Paul, personal communication, July 9, 2008).

According to the Assistant Chief, even with these increases the department has decreased its full time staffing by two and its part time staffing by 14. The department has also been forced to decrease its daily staffing level from eight to seven from September 15<sup>th</sup> until May 1<sup>st</sup> to stay within its budgetary restraints caused by increasing costs. As of September first, the department has already exceeded its 2007 fuel expenditures. These staffing constraints will allow for a minimum of two and a maximum of seven firefighters to respond as a first alarm emergency response (B. Hodges, personal communication, September 5, 2008).

At today’s costs, the department is able to maintain, but with the increases in fuel costs alone, the department must look for alternative economic resources. “In today’s economy, the need for public services often exceeds funding resources. Alternative forms of financing may offer effective solutions” (Gabler, 2004, p.41). The fire service must be looked at as a business

that must be self sufficient in order to survive. To continue to be able to respond appropriately in a timely manner to emerging issues, the fifth United States Fire Administration (USFA) operational objective, the PTFD must explore, design, and possibly create alternative economic resources. Studying how other fire departments have tackled the same problems will give the PTFD insight in how to meet this objective. This Applied Research Project (ARP) also relates to several units in the National Fire Academy's (NFA) *Executive Leadership* course dealing with leadership, integrity and influencing (National Fire Academy, 2008). All of these tools will be needed to develop alternative economic resources that will allow the PTFD to maintain adequate staffing at emergency responses.

### **Literature Review**

The purpose of this literature review is to determine what impact the use of automatic aid will have on staffing provided by the PTFD at emergency responses. An extensive internet and library reference search was done, including information gathered at the Learning Research Center (LRC) located at the NFA, magazines articles, journal articles, Executive Fire Officer Applied Research Projects, personal interviews and a questionnaire. The literature review will be used to answer the three questions posed by the author for this research project, and to discover alternative economic resources for the department.

There are several fire department staffing guidelines at emergency scenes that must be considered when evaluating fire department staffing levels. The first standard that must be assessed is the National Fire Protection Association (NFPA) 1710 established to provide response time and minimum staffing guidelines for career departments. The NFPA sets the standard of a one minute turn out time, the time needed to receive the alarm, get appropriately dressed and be responding to the scene. This standard also states that the first unit should arrive

on the scene of a fire response or an Emergency Medical Service (EMS) response in 4 minutes or less from the time the call is received (National Fire, 2004). This standard also states that an entire first alarm should be on the scene of an evolved structure fire in 8 minutes or less. The standard is to be met at least 90% of the time. This standard also addresses staffing in chapter five, where it states that the first arriving engine company shall be staffed with no less than four firefighters, being led by an officer, and that a full alarm assignment should consist of between 15 and 17 firefighters arriving on the scene within 8 minutes of the initial call (Monroe Firefighters, 2007).

Section 5.2.1.2 states that mutual aid and automatic aid are permitted to allow the responding agency to meet these time and staffing requirements. And states that the Incident Commander (IC) shall request a sufficient number of firefighters to accomplish the task at hand based on five considerations: life hazard, provisions of safe and effective firefighting, potential property loss, nature and hazards of the properties involved, and the fireground tactics that will be employed to mitigate the emergency. It also provides for recommended staffing levels for all types of fireground activities: search, Rapid Intervention Teams (RIT), back-up lines, water supply, and ventilation (National Fire, 2004). This standard also addresses staffing and response by fire department personnel at EMS and special operations: Haz-Mat, specialized rescue, or other out of the norm responses. Again NFPA 1710 allows for the use of resources from neighboring departments to meet the time and staffing standards.

Fire department staffing standards are also addressed by the U.S. Department of Labor through the Occupational Safety & Health Administration (OSHA). Standard 1910.134, Respiratory Protection and Personal Protective Equipment, addresses the physical and training requirements required for firefighters who will be wearing full protective equipment including

self-contained breathing apparatus (SCBA) when entering a potential hostile environment. This OSHA standard in section 1910.134(g)(4) also mandates that there are at least two firefighters fully dressed and prepared to make an emergency entry any time any members are entering a potentially hostile environment wearing a SCBA. It also states that if low staffing exists that the two firefighters outside may be used in other capacities, as long as they remain prepared to perform a rescue if needed (U.S.Department of, 2007).

In addition to the above listed standards, fire fighting staffing levels and requirements can be based on a series of calculations pertaining to the emergency at hand. If the size of the involved structure is known, an estimation of the water flow, gallons per minute (GPM), needed to extinguish the fire can be calculated. The formula states that GPM equals the length multiplied by the width multiplied by the height and then that product is divided by 100. For example a building 50 feet long, 90 feet wide, and 20 feet high will require 900 GPM. Based on the fact that one fire fighter is needed for every 50 to 80 GPM, it can be calculated that this structure, if fully involved will require between 12 and 18 firefighters to complete all of the necessary tasks needed to extinguish this fire (Clark, 1974/1991).

Many small career and combination departments have sufficient equipment but lack the adequate number of personnel to safely and effectively mitigate an emergency scene by themselves (Clark, 1974/1991). Mutual Aid is the sharing of resources by departments when they are requested, while automatic aid is the sharing of resources by two or more agencies without the request being made. The delivery is predetermined and response is made automatically at the time of the response (Cowardin, 1993). The need for the sharing of resources by all departments, except possibly the very largest in the country, is essential for smaller departments to accomplish the five goals specified in NFA 1710. It is an easier and better use of resources for departments

to specialize and share resources than for each department to attempt to meet all of the specialized needs of their community (Bridges, 2007). Former New York City Fire Commissioner, Thomas Von Essen while testifying at an United States Senate hearing about mutual aid programs stated “It is imperative that agencies within a given community or region work together so as not to duplicate their capabilities while leaving some needs completely unaddressed” (Mey, 2002, 11). In the same testimony he further emphasized the importance of mutual aid agreements by proposing that federal grant funding be linked to inter-jurisdictional planning and aid agreements (Mey, 2002).

The state of Illinois has established the Mutual Aid Box Alarm System (MABAS), a state wide predetermined automatic aid and mutual aid system. It encompasses all departments small and large, and all MABAS agencies operate on a common radio frequency. This system has been used successfully in both small and large emergency responses, and is being used as a template for aid packs that will cross state lines. Each agency must agree to standards of operations, an incident command system, staffing levels and on scene communication procedures. Illinois is now working to align eight Midwestern states under the MABAS system (Wilmoth, 2007). MABAS establishes up to eight box alarms, with predetermined equipment and staffing responses for each box. The number of boxes requested by the Incident Commander(IC) is determined by the size of the emergency. The majorities of the responses are handled by the first or second box alarm, with all dispatching being handled by one dispatch center for each division (Smith, 2007).

Small and large career and combination departments continue to struggle to meet the fire industry staffing guidelines at emergency responses and are developing alternative resources to meet these goals. Failure to comply caused the Houston Fire Department to be cited by the

National Institute for Occupational Safety and Health (NIOSH) in regards to a high-rise fire which resulted in firefighter deaths. The result of this citation was the city of Houston realigning its staff to meet NFPA 1710 (Suedkamp, 2005). In the Hartford Vermont area four departments have established an automatic mutual aid agreement to enhance staffing at emergency responses. All four departments are similar in size to PTFD, and have struggled to meet minimum staffing levels. The partnership was enhanced by the fact that the four departments worked well together, shared purchasing programs, used similar apparatus, and purchased similar equipment. This increased the interoperability of the departments on emergency scenes. However, the lack of one regional dispatch center created a slight delay in notification when a call was dispatched. Initial alarm assignments are pre-determined to eliminate confusion. This arrangement has allowed the departments to provide more personnel and equipment on emergency scenes in a timely manner, meeting the guidelines established by NFPA 1710 (Locke S.A, 2004).

The Vestavia Hills Alabama Fire Department and seven neighboring small departments developed an automatic aid agreement to address staffing levels at emergency situations. The eight departments were similar in size, used compatible equipment and often trained together, with two dispatch centers used by the eight departments. During their negotiations the closest stations were designated irregardless of what departments they belonged to. This greatly reduced response times, not only first due engine, but also of the entire first alarm and subsequent alarms if the emergency dictated. This agreement allowed the departments to meet the NFPA 1710 staffing guidelines and greatly improved the efficiency of all the departments at emergency responses. A second benefit to the increased staffing due to automatic aid agreements was a decrease in insurance premiums to the businesses and residents of the community by decreasing their Insurance Services Office (ISO) ratings (St. John, 2007).

Three cities in Minnesota have devised a unique automatic aid agreement. During the day, the St. Louis Park Fire Department, which is a combination department, automatically responds to all reported structure fires in the neighboring cities of Golden Valley and Hopkins, both which have only paid on call fire departments. However, in the evening, on weekends and on holidays, these two departments respond to structure fires in the city of St. Louis Park due to their increased staffing potential. These agreements allow for arrival of the needed staffing at emergency responses in compliance of NFPA 1710 (Tibbits, 1994). In addition to these local types of agreements, Minnesota Fire Marshall has proposed a state wide automatic and mutual aid plan. The intention of this plan is to quickly get communities the resources needed to handle emergency responses when the incident exceeds local resources. The MABAS model is being considered as a template because of its simplicity and efficiency (Dahm, 2006).

Lorain County, in North Central Ohio, has adopted a county wide automatic aid agreement. The agreement uses box alarms, with the needed resources predetermined for each box by the Fire Chiefs of each community. This program has increased the efficiency of all responding agencies in this county, providing increased staffing levels at emergency scenes in an efficient and timely manner. This program has also increased the interoperability of all agencies by mandating county wide participation in training and by the formation of a purchasing committee for the area. The goal of this committee is to assist with the purchase of similar equipment by all of the departments. This entire undertaking is based on an Applied Research Project from 1997 (Kirin, 1997).

Three departments in Erie County, in North Central Ohio, have established minimal automatic aid agreements. Groton Fire and Margaretta Fire have established an agreement where both departments respond automatically to any reported structure fire, but use conventional

mutual aid for any other type of response according to the Margaretta Fire Chief. Margaretta Fire also has a limited area automatic response with the Sandusky Fire Department for areas where responses may be delayed by trains, and this agreement is for both fire and EMS responses in predetermined geographical locations (T. Keimer, personal communication, May 4, 2008).

There are several implications for staffing at the PTFD if automatic aid at emergency responses is implemented. The shortage of personnel and equipment by smaller departments has forced departments across the country to rely on automatic aid to meet the staffing, response time, and equipments standards set by NFPA 1710 (Dickson, 2001). OSHA mandates that at least four firefighters be assembled prior to any interior attack to provide a two in two approach. This policy has been adopted in the PTFD Standard Operating Procedures (SOP) staffing section, which also mandates that a minimum of two firefighters respond in any of the first response vehicles (Perkins Township, 2007). The SOP also addresses mutual aid and states that calling back off duty personnel and mutual aid requests are at the discretion of the IC, and should be based on their determination of the resources needed to mitigate the emergency. The IC must consider the time of day and day of the week due to paid on call firefighters working their career jobs (Tibbits, 1994). Automatic aid would increase the initial staffing at emergency responses from the available duty crew to at least one unit responding from each of the four other agencies that would be part of the automatic aid agreement. This would increase the initial response to six to eight pieces of equipment and increase initial staffing responses from an average of six to approximately 22 (B. Hodges, personal communication, June 4, 2008).

A benefit caused by increased initial staffing and equipment levels due to a mutual aid contract is that the ISO gives up to ninety percent credit for the equipment and staffing received

due to an automatic aid agreement when it completes the community insurance rating in addition to the PTFD equipment and staffing already credited (Perry, 1995).

Automatic aid can decrease response times in areas that are physically closer to a neighboring political subdivision fire station than it is to its own fire department, increasing efficiency and expediting the mitigation of the emergency (APCO Institute, 2001). The priority of automatic aid is personal safety and operational efficiency by getting departments the proper assistance they need in a timely manner (Shouldis, 2006). Due to the physical layout of Erie County, and the fire station locations of the PTFD and the four neighboring departments, the PTFD is surrounded by the four other departments. An analysis of the travel distances from all of these stations show that an overlap by the neighboring communities fire departments would provide the most rapid and efficient use of equipment and resources at an emergency scene. In most cases, if a neighboring department's piece of equipment is automatically dispatched, it would arrive on scene prior to the apparatus of the second due stations. Because these units are considered the initial response, these units would also be used to improve the community's ISO rating. (R. Myosky, personal communication, May 25, 2008).

While automatic aid can be a positive approach to staffing, it can also have a negative effect. By responding units outside of your jurisdiction as part of an automatic aid agreement your community may be placed at risk if another emergency takes place. This depletion of resources may cause a delay in response of the needed resources to handle the situation. In these cases the community would then rely on aid from the remaining agencies to help cover this emergency. This creates a possible liability, especially at EMS responses, if the agency providing aid does not function at the same level as the home agency (Stittleburg, 2006). Often local administrators fear that their resources will be abused by neighboring departments,

depleting the needed resources of their community, and increasing the operating costs of their departments. Automatic aid agreements must account for staffing move-ups to insure adequate coverage for the communities of responding units (Coleman & Granito, 1988). Automatic aid with other fire departments can be used to provide the most efficient and cost effective service for its citizens, providing the best fire protection at the lowest cost (Eckman, 1994). As the need to provide more specialized resources, fire departments are forced to rely on automatic aid from neighboring departments to accomplish these tasks. The formation of specialized rescue teams by the different agencies, and then the sharing of these resources by the neighboring departments allow all of the departments to meet the needs of their communities in a cost effective and efficient manner (Carter, 2000).

### **Procedures**

The purpose of this applied research project is to provide a study to determine what impact the use of automatic aid will have on staffing provided by the Perkins Township Fire Department at emergency responses. The topic was chosen because if alternative staffing resources are not found, the PTFD will be forced to decrease staffing due to decreasing budgets and rising operating costs. After discussion during the leadership sections in the Executive Leadership Course, it was clear that in order to provide an efficient and safe working environment; the department must evaluate alternative staffing resources, including automatic aid.

Research for this applied research project began at the NFA in Emmitsburg, Maryland while attending the Executive Leadership course. Searches were conducted using several key words starting with fire department staffing. After retrieving multiple Executive Fire

Officer Projects, magazine articles, reports and journals, the key words were refined to include mutual aid, automatic aid, and automatic mutual aid.

On return to the author's home department, numerous hours were spent doing internet and library searches using the same key word phrases. The author utilized Hotbot and Google as search engines, because searches could be refined with the use of word filters to eliminate works with little or no relevance to the topic of this project. Local reference searches were also done to research the township specific information needed to complete this project.

Numerous personal interviews were conducted, including the fire chiefs and assistant fire chiefs of the local fire departments, the Erie County Auditor and his assistant, the Perkins Township fiscal officer and zoning inspector. These interviews were conducted to gain information specific to Perkins Township, PTFD, local fire departments, and finances as it relates to Erie County and its political subdivisions.

To assist in answering the three research questions, a questionnaire was sent, by email, to 205 fire chiefs across the United States. Internet searches using Firehouse.com and state fire department links as search points were used to locate the email addresses of the fire chiefs. The searches were also filtered to only include the email addresses for career and combination departments. The answers to the questionnaire were also used as a guide in the design and development of a rapid damage assessment plan for the PTFD.

The questionnaire was designed to address a number of issues. The first area of the questionnaire was designed to accumulate agency specific demographics, including department size and type; population served, and contact information. This information was used to contact some of the responding departments to request further information about assessment tools that they used in their initial responses.

The areas of departmental staffing guidelines are addressed in questions 2, 3 and 4.

Question 2 researches which staffing guidelines for emergency scenes are used by the responding departments. Question 3 is used to see how departments address the area of staffing in their SOGs. Question 4 determines if these departments meet these staffing standards with their normal departmental staffing.

The next three questions study whether these agencies use mutual and automatic aid on a regular basis, and what place it plays in the departments daily operations. Questions 5 and 6 collected data as to whether these departments use mutual aid and/or automatic aid. Questions 7 then relates the use of mutual and automatic aid to the area of staffing levels. This question evaluates if departments are routinely using aid as means to meet the fire service staffing levels at emergency scenes as dictated by NFPA and OSHA.

Questions 8 through 13 examined more closely how these departments have incorporated aid agreements in their daily operations, and the effect these agreements have had on their department. These questions were used to research the positive and negative effects resulting from these types of aid agreements. The questions also addressed what other components, such as regionalized dispatch centers, compatible equipment, and interdepartmental training made the implementation of these agreements easier.

The last section asked the responding agencies, based on their exposure to automatic aid, to evaluate how the PTFD would be affected by automatic aid in a number of areas. This question provided insight into what benefits the PTFD might experience if they enter into an automatic aid agreement. Of particular interest were the questions addressing staffing, response times, safety and efficiency on emergency scenes. This section also looked to see if there were any potential cost sharing and potential for increased interoperability due to these agreements.

There were several limitations noted in preparation of this research project starting with the population receiving the questionnaire. This was a random sampling of chiefs of career and combination departments across the nation. The sample was limited to chiefs who had their email addresses posted on their departmental website. Searches of the internet and Firehouse.com were used to locate the web sites of these departments, and then the links were checked for the needed email addresses. A second limitation was that only departments that had web pages were included in the sample, because the author knew of no other database available to get the email addresses from. The sampling was also limited to career and combination departments since they more closely related the PTFD. The author must also assume that all of the information collected is correct and has not been altered in any way. The last limitation noted was the lack of knowledge of the departments included in the sampling.

## **Results**

The information gathered while completing this applied research project was accumulated from an extensive reference search, literature review, evaluation of the responses to a questionnaire, and personal interviews. Copies of the questionnaire, a summation of the information gathered from the questionnaire, and a list of the departments contacted can be found in the appendix section. These results have provided the information needed to answer the three research questions proposed in this project.

### **What are the fire industry staffing guidelines for fire department emergency responses?**

The literature review clearly demonstrates that there are two major fire department standards that provide guidelines for fire department staffing at emergency responses. NFPA 1710 gives clear direction as response times, equipment responses, and minimum staffing at emergency scenes. Because this is a guideline, the NFPA has no formal disciplinary policy for

failure to adhere to these standards. However, these are the standards that a department will be judged against in the case of any legal proceedings. For this reason this standard has become the benchmark for staffing levels by career and combination departments. The second standard is an OSHA regulation with disciplinary possibilities; this was demonstrated in the investigation following the loss of Huston Firefighters where OSHA cited the department for failure to adhere to NFPA 1710 and OSHA 1910.134. This citation exposes the city to legal liability for the loss of these firefighters (Suedkamp, 2005).

The questionnaire was emailed to 205 fire chiefs, of career and combination departments, across the United States. Question one collected demographic information, including contact information, phone numbers, population and physical size of communities served, and department type. This data was used to group the responding departments into two groups, career or combination. There were 64 responses with all 46 being from career departments and 18 being from combination departments. The size of the communities served was evaluated to determine the departments that were of similar make-up of the PTFD. Also the contact information was used to contact some of the responding departments to request further information and copies of their automatic aid agreements.

Question 2 was used to find which staffing standards that the responding departments used to set their staffing standards. Twenty-eight departments responded that their departments used the NFPA standard as their staffing benchmark. Five departments replied that they used the OSHA standard as the primary source of their staffing guidelines. Four departments listed state standards as their guidelines, but when contacted for specifics, they did not respond. The remaining 27 responders listed other, and when contacted the majority responded that their guidelines were a combination of both the NFPA and OSHA standards. Of the responding

agencies 43 or 71% said that staffing levels were part of their departments' standard operating guidelines (SOG) or standard operating procedures (SOP).

**What are the staffing requirements for emergency responses that career and combination departments, of similar size, encountered when automatic aid was implemented?**

The literature review revealed that automatic aid has been implemented by departments across the nation as a means to meet the accepted fire industry staffing standards at emergency responses. Departments are using automatic aid to provide efficient and cost effective fire protection to the jurisdictions that they serve. Use of automatic aid has been shown to decrease response times of initial and first alarm units, allowing departments to meet the NFPA and OSHA standards. Automatic aid agreements have also shown to decrease the duplication of services by neighboring communities.

The next group of 10 questions on the questionnaire seeks information from the responding agencies into their use of mutual and automatic aid, how this aid is used to meet staffing standards, the interaction between neighboring departments, equipment interoperability, and the positive and negative effects that automatic aid has had on their departments. Question 4 identifies that only 39 or 61% of departments meet their accepted staffing levels with their normal daily staffing levels. The next two questions reveal that 62 or 97% of the responding departments use mutual aid on a routine basis, with 27 or 42%, also having entered into automatic aid agreements. Eight of the responding fire departments stated that they rely on their aid agreements to meet fire department staffing standards.

Interoperability between neighboring agencies has proven invaluable in the smooth utilization of automatic and mutual aid. The literature review revealed that comparable equipment, interdepartmental training, comparable SOGs/SOPs, and regionalized dispatch

created an efficient working agreement. The next group of five questions made inquiries in this area. Regionalized dispatch centers were listed in numerous articles as a key factor in successful automatic aid agreements. The responses to question 8 show that 27 or 42% of the departments use a regionalized dispatch center. There were also the 42 departments that responded that they have automatic aid agreements. Thirty-one departments stated that they request aid from neighboring departments by having their dispatch centers contact the dispatch centers of the neighboring departments by phone. Six of the responding departments say that they request aid by contacting the neighboring departments by use of radios, either directly or through their dispatch center. Information was collected in question 11 that 29 or 45% of the responding departments regularly train with their neighboring departments to increase interoperability. The responses to question 12 indicate that 52 or 81% of these departments use compatible equipment, also increasing interoperability during emergency responses.

There were a number of positive responses to the use of automatic aid to improve fire department efficiency. Fifty-eight, or nearly 91%, of the departments that responded to the questionnaire felt that there were multiple positive effects due to the use of automatic aid. Some of these listed positive effects are: The ability to provide a more continuous level of service during a peak event, adequate resources for water shuttles at rural fires, county wide dispatch centers and interoperability of radios and equipment, meeting staffing standards by increasing equipment and staffing in initial responses, standardized SOGs for all participating departments, increased relationships with neighboring departments, increased scene safety due to increased staffing, assists smaller departments to meet staffing standards, provides quality and cost effective service to your community, and works best with a regional dispatch center. The results

of the questionnaire clearly indicate that the responding agencies see a clear benefit to the implementation of automatic aid.

These departments also reported a number of negative concerns in respect to the use of automatic aid to improve staffing and operations at emergency scenes. Twenty-seven, or 42% of the responding agencies reported that there were negative factors that they felt were the result of their automatic aid agreements. Some of the negative concerns that they reported are: communities and politicians begin to rely on aid instead of looking at ways to increase their own department's staffing, neighboring department does not have available resources to respond when aid is called for, the possibility that a department will have manpower and equipment out of their jurisdiction for long periods of time, cost incurred when a department responds to another community, and interference by politicians can have a negative affect on the aid system. The comments also indicated that most of these issues can be addressed when the agreements are worked out, thus limiting their negative affects.

**What are the implications for staffing at the PTFD for automatic aid emergency responses?**

The last section of the questionnaire evaluated and gained information about the impact that may be experienced by the PTFD if automatic aid was implemented, based on the experience of the chiefs who responded to the questionnaire. A limitation to this question was that the majority of these chiefs had little or no working knowledge of the PTFD, and could only base their answers on the impact that automatic aid on their departments. Reduced response times by initial units would be accomplished due to the use of automatic aid according to 52 or 81% of the chiefs who responded. In addition, 60, or nearly 91% of the responding chiefs believe that automatic aid will increase staffing on initial responses. As a result of automatic aid,

44 or 69% of these chiefs feel that automatic aid will increase scene safety and firefighter accountability.

The next three sections of question 14 investigated the area of departmental efficiency during emergency operations. Thirty-five, or 55% of responses indicated they feel that automatic aid will increase the efficiency of the PTFD on emergency scenes, while 28 or 44% felt that automatic aid will have no impact on the PTFD. But responses to section four of this question indicated that 63 or nearly 98% of the responders expect automatic aid to increase the resources available to the PTFD during emergency responses. Another benefit identified by 42 or 66% of the responding chiefs was increased water supply capabilities at emergency scenes. All of the remaining chiefs, except one were neutral on this question. One chief responded negatively to the area of increased water supply at emergency scenes, but this chief gave no explanation to clarify the response.

The last four sections of question 14 addressed the issue of inter-departmental relations and the overall impact that automatic aid may have on the PTFD. Thirty-eight, or 59% of the responding chiefs responded that they felt that automatic aid would increase the interoperability between the departments who participate in these agreements. Twenty-five, or 39% of the responders were neutral in their response to this question. Slightly less than 50% of the responders saw automatic aid as a positive way for departments to share costs and become more cost effective. Twenty-three participants were neutral to this question, while six chiefs felt that automatic aid would have a negative affect on cost sharing between the departments. The response to section nine of question 14 indicated that the responding chiefs expected improved relationships between departments who have automatic aid agreements. Fifty-six, or 87% responded favorably to this concept, while eight responded neutrally. The last section to this

question was how these chiefs felt that the level of emergency services to the residents of Perkins Township would be impacted by an automatic aid agreement. The majority of the responders, 44 or 68% felt that automatic aid would create a situation where emergency services would improve for the residents. The remaining 20 chiefs felt that the level of services would neither have a positive or negative impact with the implementation of automatic aid.

## **Discussion**

### **Relationship between Study and Literature Review**

The community of Perkins Township is a rapidly expanding suburban area in north central Ohio. This is evident with data provided in the yearly zoning reports by Zoning Inspector, James Lamb. This data has shown that there is a substantial increase in both single and multi-family dwelling permits issued each year. The demographic make-up of the community also shows an extremely large geriatric population, including three nursing homes, two assisted living communities, and two independent retirement communities. The last two multi-family residential communities, even though not specifically listed as retirement communities, are made up predominately of residents over the age of 60 (R. Myosky, personal communication, July 22, 2008). R. Myosky is the Perkins Twp. Fire Chief, and assists James Lamb in the zoning office.

The literature reveals that NFPA 1710 and OSHA 1910.134 are two most current standards followed pertaining to staffing and response times for emergency responses. NFPA 1710 states that all responding units are to be staffed with at least four personnel and that the initial units should be on the emergency scene in 4 minutes or less (2004). OSHA 1910.134 requires that there be at least two firefighters prepared to initiate a rescue whenever there are interior operations taking place. This means there must be at least four firefighters on the scene

before attempting an interior search and rescue under normal conditions (2007). The review also documented that existing fire service formulas may be used to calculate fire flows needed for emergency responses. These needed fire flows are then used to calculate the number of firefighters that will be needed to complete the task (Clark, 1974/1976).

In comparison, the results from the questionnaire mimicked the review listing NFPA 1710 and OSHA 1910.134 as the two most used standards cited, by the responding departments, used to set staffing levels at emergency responses. Several departments responded that their staffing levels were dictated by their SOGs, but when contacted, by this author for clarification, revealed that their SOGs were actually a combination of the above two listed standards, and contained the staffing levels that are to be used for emergency responses.

Research revealed that staffing and equipment shortages have caused departments across the nation to use automatic aid more then ever before (Dickson, 2001). The questionnaire agrees with the current research and shows that only 39 of the responding 64 departments meet the required staffing levels at emergency scenes with their normal staffing levels. The results also show that nearly all of the responding departments are engaged in mutual aid contracts to supplement their staffing at emergency fire responses. Further, 27 responders indicated that they are actively engaged in automatic aid agreements to boost staffing levels, and eight departments actually use these agreements to meet their minimum staffing levels.

There were several auxiliary areas which seemed to this author that went hand and hand with automatic aid to increase the efficiency of interoperability of departments when automatic aid was implemented. The first area that seemed to stand out was the use of a central or regionalized dispatch center. In Orange County all departments have standing automatic Aid agreements. Before their dispatch centers were consolidated, using radios and phone it took 3 to

5 minutes start to finish to dispatch all of the appropriate departments. After the merging of all of the dispatch centers into one central center, the time from call to dispatch now only takes about 3 seconds (Stoffel, 1999). The questionnaire results showed that 27 of the responding agencies were involved with regional dispatch centers, while the remaining departments used radios or phones to contact neighboring departments when aid was needed. In reviewing the returned questionnaires it is amazing to this author that all of the departments that were engaged in automatic aid agreements were also part of a regionalized dispatch center to expedite dispatch.

Incompatibility of equipment can create a major stumbling block to any automatic aid agreement. In Wenatchee, WA, this was a major problem initially, but was overcome by creating interoperability using inexpensive alternatives, such as adapters, cell phones, and small tools initially and interdepartmental training. Future purchases by the departments are now based not only on cost but also on the compatibility with the other aid agreement departments (Careless, 2007). The responding agents agreed with the literature review in this area, with 52 departments responding that their equipment is compatible with the equipment used by their neighboring departments, and all of the departments that are involved in automatic aid agreements also train with their neighboring departments to increase efficiency and interoperability.

Both the literature review and the results of the questionnaire revealed several similar positive and negative effects created by the utilization of automatic aid at emergency responses. Increased staffing and equipment for initial responses and for first response units was the most cited benefit when automatic aid was implemented. The North Chicago Fire Department has entered into an automatic aid agreement with Abbott Laboratories and the Great Lake Naval Training Base to handle the threats of terrorism in the Chicago area. The commitment by these

three agencies demonstrates their unified belief that no fire departments, industrial, private or public can continue to operate comfortably or cautiously in competitive isolation. They are united in the concept that resources must be shared to effectively staff and handle all types of emergency responses (Rossetti, 2002).

In reviewing the results and the literature review this author has noted that the area of most concern created by the use of automatic aid was the possibility of decreased resources to an emergency in an area that has already committed resources to an emergency response in another political area. In reviewing the comments on the questionnaire and resources that were researched, it was stated that this is handled by using a multiple box alarm system that allows for move ups and responses by other agencies in a predetermined order. This efficient use of resources creates a situation where all responses are handled in a timely and efficient order (Carter, 2003).

### **Interpretation of Results**

In reviewing results from the questionnaire, this author was upset that only 31 of the departments contacted responded. A second emailing of the questionnaire to the departments that did not originally respond had slight effect in gaining results. As noted, the results clearly show that NFPA 1710 and OSHA 1910.134 are the two most documented guidelines for equipment and staffing levels at emergency responses. The results show that the responding agencies have incorporated one or both of these standards as the benchmarks used for emergency incident staffing levels. The data also indicates that only about 60% of the responders can meet these standards with their normal staffing levels, while eight departments actually rely on aid agreements to meet these standards. An interesting point was nearly all of the responding agencies use mutual aid agreements to supplement staffing and equipment needs.

Additionally 27 agencies use automatic aid agreements to expedite the response of staffing and equipment to emergency scenes.

The use of compatible equipment, regionalized dispatch centers, and regionalized training were the key concepts reported by the responding agencies to increase the efficiency and interoperability of departments participating in automatic aid agreements. Eighty-one percent of the responding departments reported that they have increased interoperability by purchasing equipment that was compatible with their neighboring departments. This author feels that for a number of departments to successfully enter into an automatic aid agreement that the departments must first work towards compatibility, possibly by forming a regionalized purchasing committee. This author also feels to expedite the dispatch of units in an efficient and timely manner; the area departments must be engaged in some type of regionalized dispatch agreement to maximize the efficiency of the agreements. The importance of regionalized dispatch was documented by all of the responding agencies that are engaged in automatic aid agreements, and all of these agencies have already made this switch. The importance of regionalized training for familiarization of equipment and staff and to increase efficiency was also documented by all of the departments that are currently involved in automatic aid agreements.

The responding agencies listed several positive and negative effects that they felt were the result of automatic aid agreements. Overwhelmingly these agencies felt that automatic aid agreements increased the efficiency of departments operating at emergency scenes by expediting the response of the needed staffing and equipment, on initial and additional alarms. They feel that these agreements allow a community to provide quality services that the community would not be able to normally provide. The data also indicates that the majority of the negative effects

can be eliminated by having the agreements carefully written and signed by all participating agencies. The incorporation of comparable SOGs by all agencies involved eliminates most areas of concern, including incident command and financial responsibility. These agreements also eliminate the possibility of political interferences by addressing the issues of concern to all communities in the aid agreements before they are signed.

Based on their knowledge of automatic aid, the responding agencies overwhelmingly predicted that the PTFD would experience many positive effects if the department incorporates an automatic aid agreement. In all ten areas addressed in the questionnaire, the majority of the departments felt that these agreements would increase the efficiency of the PTFD at emergency responses by increasing the available staff during the initial response and subsequent alarms. They also felt that this increased staffing would increase the safety and accountability of firefighters working at these emergency scenes. These agencies also predicted that automatic aid agreements will increase the interoperability of neighboring departments while actually creating a possible cost savings to Perkins Township. This savings would be caused by the sharing versus the duplication of specialized resources.

### **Implication for the Organization**

The PTFD is similar to most career and combination fire departments across the United States being expected to do more with less. The run volume for this department continues to increase as documented in the PTFD Year End Reports. In 2005, the PTFD responded to 1724 EMS and 395 fire calls, the department did not report average response times for fire calls but did document an average response time for EMS calls as 3 minutes and 25 seconds (PTFD Administrative, 2006). In 2006 the department was faced with its busiest recorded year, responding to 1829 EMS calls and 521 fire calls Again no average response time was recorded

for fire responses, but the department has documented an average response time for EMS calls as 3 minutes and 15 seconds (PTFD Administrative, 2007). Last year the department showed a slight decrease in responses responding to 1773 EMS and 505 fire calls. Again no average fire response time was published, but the department did record a 3 minute and 14 second response time for EMS calls (PTFD Administrative, 2008). According to fire department records, as of August 31, 2008, the PTFD has responded to 1346 EMS calls and 339 fire calls (E. Pearson, personal communication, September 12, 2008). This increase in run volume often leaves only one station available for the next call, with three or four firefighters manning that station.

During this time frame the department was faced to operate on a decreasing budget, due to the removal of General Fund money from the fire department operating budget. The PTFD operating budget has been stagnant at \$2.2 million dollars since 2005 (R. Myosky, personal communication, July 22, 2008). Increases in operating costs, including fuel expenses, wages, and insurance premiums has greatly impacted the budget, causing a decrease in full and part-time staffing. The decrease in available resources and the illness of one of the career firefighters has caused the department to operate two shifts with six career firefighters and one shift with seven career firefighters. The department until late in 2007 complemented the shifts with part-personnel to create an eight man shift on duty, however due to the lack of available funds the department now operates with eight on duty from May 1st to September 15th, and with seven man shifts the remainder of the year (B. Hodges, personal communication, September 5, 2008).

The above data clearly indicates, to this author, that the PTFD call volume will continue to grow and that the only budget increases that will be realized is the replacement of the 5 mil Levy that was passed in November of 2007. This increase will first be distributed in March of 2009 and will amount to about \$200,000 per year. Increasing fuel costs, contractual

commitments and other increased costs have already encumbered this entire amount (B. Hodges, personal communication, September 5, 2008).

Fire service standards, including NFPA 1710 and OSHA 1910.134, have been proven to be the standards that the PTFD must adhere to, because these are the standards that they will be judged against if a critical event occurs on an emergency scene. These standards were established for the protection of the firefighters when operating at scenes, by establishing responses time, equipment and staffing standards. However, it is evident to this author that the increasing response volumes and decreasing operating budget of the PTFD, the department will be increasingly forced to operate below these standards if alternative staffing resources are not found. At this point the department will be forced to respond with the available resources and initiate responses with below standard staffing, delay responses until other staffing resources are on scene, or pre-establish responses with neighboring departments to meet the resources needed at an emergency scene.

The research gathered for this APR also indicates that the department must strive to increase interoperability with its neighboring departments to increase efficiency when the departments are working together at emergency responses. The data collected also reveals that for the PTFD to employ automatic aid as a possible alternative staffing resource, the local departments must join together to evaluate purchases of new equipment to ensure the compatibility between neighboring departments. Also, these departments must establish some type of consolidated dispatch center to ensure rapid and efficient dispatch of the appropriate equipment to emergency scenes. This author feels that individual department selfishness must be lost and a goal of unity and efficiency established for the better service to the public of all local

political subdivisions. The integrity of the fire service management will be put to the test to make this a reality.

### **Recommendations**

The research gathered from the literature review, interviews and the questionnaire clearly demonstrates the impact that increasing call volumes and a stagnant budget will have on the PTFD. The research clearly indicates the staffing levels that fire departments must meet in order to increase safety and efficiency, while decreasing liability to the department. The data collected and literature reviewed indicate that there are alternative staffing resources that if implemented by the PTFD will allow the department to continue to meet these standards, increase operability with neighboring departments, and possibly help to decrease operating costs. These alternative resources have been shown to actually benefit the residents of the community by actually decreasing insurance costs.

The purpose of this project was to provide a study to determine what impact the use of automatic aid will have on staffing provided by the PTFD at emergency responses. Based on run volume trends, budget information gathered, data collected, interviews and literature reviewed, the author makes the following recommendations if the department is to continue providing safe and efficient emergency service to the residents of Perkins Township.

1. Establish a committee of all local fire departments to insure compatibility of equipment when purchases are made and to find solutions to create compatibility of existing equipment.
2. Establish monthly interdepartmental training involving all area departments to increase efficiency when working together at emergency responses.

3. Establish a committee of members of all local political sub-divisions, to establish one central dispatch center to serve all local departments.

4. Further study the feasibility of a county-wide automatic aid agreement, using a MABAS type system.

5. Enter into automatic aid agreements with local departments, while the county wide system is being evaluated.

In conclusion, the PTFD must continue to move forward, always evaluating alternative staffing and equipment resources while searching for alternative funding resources, to provide safe and efficient service to the residents of Perkins Township.

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## Appendix A

## Staffing / Automatic Aid Questionnaire

## National Fire Academy

*Executive Leadership*

Dear Fire Agency Official:

I would like to thank you for taking the time to complete this questionnaire. The questionnaire pertains to the use of mutual aid and automatic aid to increase staffing at emergency scenes. This questionnaire will be used to determine what staffing criteria fire departments use, how mutual and automatic aid is used by departments, the positive and negative results of aid and what other factors are needed for the efficient implementation of automatic aid.

**1. Agency Information:**

- a. Department Name: \_\_\_\_\_
- b. Contact Person: \_\_\_\_\_
- c. Telephone / Fax Number: \_\_\_\_\_
- d. Email Address: \_\_\_\_\_
- e. Population Served/ Square Miles: \_\_\_\_\_
- f. Department Type: Paid \_\_\_\_\_ Combination \_\_\_\_\_ Volunteer \_\_\_\_\_

**2. What staffing guidelines does your department use for emergency responses?**

NFPA \_\_\_\_\_ STATE \_\_\_\_\_ OSHA \_\_\_\_\_ OTHER \_\_\_\_\_

**3. Are your staffing guidelines part of your SOGs?**

YES \_\_\_\_\_ NO \_\_\_\_\_

**4. Does your normal staffing satisfy the above standards?**

YES \_\_\_\_\_ NO \_\_\_\_\_

**5. Does your department use mutual aid?**

YES \_\_\_\_\_ NO \_\_\_\_\_

**6. Does your department use automatic aid?**

YES \_\_\_\_\_ NO \_\_\_\_\_

7. Does your department rely on aid agreements to meet staffing standards?
- YES \_\_\_\_ NO \_\_\_\_
8. How are the neighboring departments dispatched?
- Regional Dispatch \_\_\_\_ Phone by your Dispatch \_\_\_\_ Radio between dispatch \_\_\_\_
9. Has your aid programs been beneficial to your department? (please describe)
- YES \_\_\_\_ NO \_\_\_\_
10. Has your aid agreements caused any negative concerns for your department? (please describe)
- YES \_\_\_\_ NO \_\_\_\_
11. Do you routinely train with your neighboring departments?
- YES \_\_\_\_ NO \_\_\_\_
12. Is the equipment used by your neighboring departments compatible with your equipment?
- (ie: radios, accountability systems, SCBA, hardware, LDH, etc.)
- YES \_\_\_\_ NO \_\_\_\_
13. Please list any other positive or negative factors that you feel are pertinent to these issues.
14. Please complete the following section, pertaining to your experience how you feel the Perkins Twp.

Fire Department would be impacted by an automatic aid agreement.

SA = Strongly agree    A = Agree    N = Neutral    D = Disagree    SD = Strongly Disagree

Automatic Aid with Perkins Twp. Fire Department and neighboring departments would result in:

- |    |   |    |   |   |   |    |
|----|---|----|---|---|---|----|
| 1. | Reduced response times by initial units       | SA | A | N | D | SD |
| 2. | Improved Staffing on initial alarms.          | SA | A | N | D | SD |
| 3. | Increased safety and accountability on scenes | SA | A | N | D | SD |
| 4. | Increased resources on emergency scenes       | SA | A | N | D | SD |
| 5. | Increased on scene water supply capabilities  | SA | A | N | D | SD |

<b>6.</b>	<b>Increases efficiency on emergency scenes</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
<b>7.</b>	<b>Increased interoperability between departments</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
<b>8.</b>	<b>Increased opportunities for cost sharing</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
<b>9.</b>	<b>Improved relationships between fire departments</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
<b>10.</b>	<b>Better emergency service for township residents</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>

Thank you for your assistance with this questionnaire. I would appreciate it if you returned with this completed document; any forms or policy that you feel would be useful for my research.

Keith J. Wohlever , Fire Captain  
 Perkins Twp. Fire Department  
 3003 Campbell Street  
[LT202@perkinsfire.com](mailto:LT202@perkinsfire.com)  
 Sandusky, Ohio 44870  
 Phone: 419-626-1334 Facsimile: 419-621-2170

## Appendix B

## Questionnaire Results

## National Fire Academy

*Executive Leadership*

## 1. Agency Information:

Department Type: Paid 46 Combination 18 Volunteer       

## 2. What staffing guidelines does your department use for emergency responses?

NFPA 28 STATE 4 OSHA 5 OTHER 27

## 3. Are your staffing guidelines part of your SOGs?

YES 43 NO 21

## 4. Does your normal staffing satisfy the above standards?

YES 39 NO 25

## 5. Does your department use mutual aid?

YES 62 NO 2

## 6. Does your department use automatic aid?

YES 27 NO 37

## 7. Does your department rely on aid agreements to meet staffing standards?

YES 8 NO 56

## 8. How are the neighboring departments dispatched?

Regional Dispatch 27 Phone by your Dispatch 31 Radio between dispatch 6

## 9. Has your aid programs been beneficial to your department? (please describe)

YES 58 NO 6

10. Has your aid agreements caused any negative concerns for your department? (please describe)

YES 27 NO 37

11. Do you routinely train with your neighboring departments?

YES 29 NO 35

12. Is the equipment used by your neighboring departments compatible with your equipment?

(ie: radios, accountability systems, SCBA, hardware, LDH, etc.)

YES 52 NO 12

13. Please list any other positive or negative factors that you feel are pertinent to these issues.

#### POSITIVE

1. Ability to provide a more continuous level of service during a peak incident event
2. Adequate resources for water shuttles.
3. County wide dispatch and interoperability of radio equipment.
4. Increase equipment and manpower in initial response, meet staffing standards.
5. Standardized SOGs for all participating departments
6. Increases relationships with neighboring departments.
7. Increased staffing at all incidents, increases scene safety.
8. Provide quality service to community that could not be afforded without auto aid.
9. Works best with regionalized dispatch center
10. Great for small departments, especially during day when volunteers are usually not available.

#### NEGATIVE

1. Reliance on aid verses increasing staffing, problem arises when neighboring community does not have the resources to respond when needed.
2. Vehicles and manpower out of community for long periods of time.
3. Who pays costs for neighboring departments when equipment is damages, etc., this needs to be addressed up front.
4. Political interference can have a negative impact on system.
5. Politicians often feel mutual aid is better then increasing staffing.

14. Please complete the following section, pertaining to your experience how you feel the Perkins Twp.

Fire Department would be impacted by an automatic aid agreement.

SA = Strongly agree    A = Agree    N = Neutral    D = Disagree    SD = Strongly Disagree

Automatic Aid with Perkins Twp. Fire Department and neighboring departments would result in:

- |    |   |    |    |    |   |    |
|----|---|----|----|----|---|----|
| 1. | Reduced response times by initial units | 24 | 28 | 12 | D | SD |
| 2. | Improved Staffing on initial alarms.    | 22 | 38 | 4  | D | SD |

3.	Increased safety and accountability on scenes	23	21	19	1	SD
4.	Increased resources on emergency scenes	32	31	1	D	SD
5.	Increased on scene water supply capabilities	25	17	21	1	SD
6.	Increases efficiency on emergency scenes	14	21	28	1	SD
7.	Increased interoperability between departments	17	21	25	1	SD
8.	Increased opportunities for cost sharing	10	25	23	5	1
9.	Improved relationships between fire departments	39	17	8	D	SD
10.	Better emergency service for township residents	22	22	20	D	SD

## Appendix C

## United States Fire Departments Contacted

## Alabama

1. Albertville Fire/Rescue  
212 South Broad Street  
P. O. Box 1248  
Albertville, AL 35950
2. Saraland Fire & Rescue  
716 Saraland Blvd. S  
Saraland, AL 36571
3. Decatur Fire & Rescue  
4119 Old Highway 31 SW  
Decatur, AL 35602
4. The City of Mobile Fire & Rescue  
Central Fire Station  
701 St. Francis Street  
Mobile, Alabama 36602
5. Montgomery Fire/Rescue  
19 Madison Avenue  
Montgomery, AL 36104

## Arizona

1. Flagstaff Fire Department  
211 W. Aspen Ave.  
Flagstaff, AZ 86001
2. Phoenix Fire Department  
150 S. 12th St.  
Phoenix, AZ 85034
3. Tucson Fire Department  
265 S. Church Avenue  
Tucson, Arizona 85701
4. Yuma Fire Department  
Yuma Arizona

## Alaska

1. Ketchikan Fire Department  
319 Main Street  
Ketchikan, AK 99901
2. Anchorage Fire Department  
1140 Airport Heights Rd  
Anchorage Co, AK 99516

## Alaska

3. Capital City Fire and Rescue  
Juneau Borough  
Juneau, AK 99801
4. North Pole Fire Department  
125 Snowman Ln  
North Pole, AK 99705

## Arkansas

1. Maumelle Fire Department  
Police & Fire Building  
100 Millwood Circle  
Maumelle, AR 72113
2. Fayetteville Fire Department  
303 W. Center St  
Fayetteville, AR 72701
3. Jonesboro Fire Department  
3215 E Johnson Ave  
Jonesville, AR 72401
4. Rogers Fire Department  
201 N First Street  
Rogers, AR 72756

## California

1. San Diego Fire-Rescue  
1010 2nd Avenue, Suite 400  
San Diego, CA 92101
2. Long Beach Fire Department  
1222 Daisy Ave  
Long Beach, CA 90813
3. Hollister Fire Department  
110 Fifth Street - Station 1  
Hollister, CA 95023
4. San Marcos Fire Department  
1 Civic Center Drive  
San Marcos, CA 92069
5. LA County Fire Dept.

## Colorado

1. Denver Fire Department  
745 West Colfax Avenue  
Denver, Colorado 80204
2. Steamboat Springs Fire  
PO Box 5088;  
Steamboat Springs, CO 80477
3. Arvada Fire Protection District  
6503 Simms Street  
Arvada, Colorado 80004
4. Sheridan Fire Department  
4101 S. Federal Blvd.  
Sheridan, CO 80110-5399

## Connecticut

1. Bridgeport Fire Department  
30 Congress Street  
Bridgeport, CT 06604
2. Norwalk Fire Department  
121 Connecticut Ave.  
Norwalk, CT 06854
3. Naugatuck Fire Department  
41 Maple Street  
Naugatuck, CT 06770
4. Hartford Fire Department  
275 Pearl Street  
Hartford CT 06103

## Delaware

1. Wilmington Fire Department  
Wilmington, DE 19801

## Florida

1. Winter Park Fire Dept  
343 West Canton Ave  
Winter Park, FL 32789
2. Avon Park Fire Dept.  
98 S. Delaney Avenue  
Avon Park, FL 33825
3. West Palm Beach Fire  
500 North Dixie Highway  
West Palm Beach, FL 33401
4. Naples Fire Department  
355 Riverside Circle  
Naples, Florida 34102

## Georgia

1. Atlanta Fire Department

675 Ponce de Leon Avenue, 2nd  
Atlanta, GA 30308

2. Augusta Fire Department  
925 Laney Walker Blvd.  
Augusta, GA 30901
3. College Park Fire Dept  
3737 College Street  
College Park, GA 30337
4. Americus Fire  
119 South Lee Street  
Americus, GA 31709

## Idaho

1. Boise Fire Department  
150 N. Capitol Blvd.  
P.O. Box 500  
Boise, Idaho 83701
2. Kootenai County Fire & Rescue  
Post Falls, ID 83854
3. Sagle Fire  
Sagle, ID 83860

## Illinois

1. Tuscola Fire Department  
214 N. Main,  
Tuscola, IL 61953
2. Freeport Fire Department  
230 W. Stephenson Street  
Freeport, IL 61032
3. Champaign Fire  
307 S. Randolph St.  
Champaign, IL 61820
4. Quincy Fire Department  
906 Vermont Street  
Quincy, IL 62301

## Indiana

1. Wabash Twp. Fire Department  
2811 Klondike Road  
West Lafayette, IN 47906
2. Greenwood Fire Department  
155 East Main Street  
Greenwood IN 46143

## Indiana

3. Delphi Fire Department

- 201 South Union St  
Delphi IN 46923
4. West Lafayette Fire Dept  
300 North Street  
West Lafayette, IN 47906

## Iowa

1. Des Moines Fire Department  
900 Mulberry Street  
Des Moines, IA 50309
2. Cedar Rapids Fire Department  
222 3rd Street NW  
Cedar Rapids, IA 52405
3. Creston Fire Department  
500 North Sumner Avenue  
U.S. Highway 25 West Howard St.  
Creston, IA 50801-2045
4. Iowa City Fire Dept  
410 east Washington St.  
Iowa City, IA 52240

## Kansas

1. Newton Fire/EMS  
Newton, KS 67114
2. Wichita Fire Dept  
455 North Main  
Wichita, KS 67202
3. Manhattan Fire Dept  
2000 Denison  
Manhattan, KS 66502
4. Topeka Fire Dept  
324 SE Jefferson St  
Topeka, KS 66607

## Kentucky

1. Lexington Fire Department  
219 Eastthird Street  
Lexington, KY 40508
2. McMahan Fire Protection District  
4318 Taylorsville Road  
Louisville, KY 40220

## Kentucky

3. Glasgow Fire Department

- 203 South Broadway St.  
Glasgow, KY 42141
4. Alexandria Fire District  
7951 Alexandria Pike  
Alexandria, KY 41001

## Louisiana

1. Baton Rouge Fire Dept  
8011 Merle Gustafson Dr.  
Baton Rouge, LA 70807
2. Gonzales Fire Rescue  
120 S. Irma Blvd.  
Gonzales, LA 70737
3. Bossier City Fire Department  
PO Box 5337  
Bossier City, LA 71171
4. Shreveport Fire Department  
Shreveport, LA 70785

## Maine

1. Rumford Fire Department  
Rumford, ME 4276
2. Waterville Fire and Rescue  
Waterville, ME 4901
3. Portland Fire Department  
380 Congress Street  
Portland, ME 04101
4. Gardiner Maine  
6 Church Street  
Gardiner, ME 04345

## Maryland

1. Anne Arundel County Fire Dept  
Severna Park, MD 21146

## Maryland

2. North East Fire Company  
210 S. Mauldin Ave  
P.O. Box 770  
North East, MD 21901
3. Annapolis Fire Dept.  
1790 Forest Dr  
Annapolis, MD 21401

## Maryland

4. Fort Detrick Fire & Emergency

Building 1504 Fort Detrick  
Frederick, MD 21702

#### Massachusetts

1. Boston Fire Department  
115 Southhampton Street  
Boston, MA 02118
2. Cape Cod Fire Department  
COMM Fire Department  
1875 Falmouth Road  
Centerville, MA 02632
3. Truro Fire Rescue  
344 Route Six  
Truro, MA 02666
4. Lexington Fire Dept.  
45 Bedford Street  
Lexington, MA 02420

#### Michigan

1. Northville Fire Department  
215 West Main Street  
Northville, MI 48167
2. Putnam Township Fire Department  
131 S. Howell St.  
Pinckney, MI 48169
3. Royal Oak Fire Department  
215 E. Sixth St.  
Royal Oak, MI 48067
4. Trenton Fire Department  
200 Maple Rd  
Trenton, MI 48183
5. Lapeer Fire Department  
2300 West Genesee Street  
Lapeer, MI 48446

#### Minnesota

1. Chanhassen Fire Department  
7700 Market Blvd  
Chanhassen MN 55317
2. Minnetonka Fire Department  
14550 Minnetonka Boulevard  
Minnetonka, MN 55345

#### Minnesota

3. St. Paul Fire Department

296 W. Seventh St  
St. Paul, MN 55102

4. Grand Rapids Fire Department  
420 N. Pokegama Avenue  
Grand Rapids, MN 55744

#### Mississippi

1. Diamondhead Fire Department  
4440 Kalani Drive  
Diamondhead, Mississippi 39525
2. Bay St Louis Fire Department  
310 Old Spanish Trail  
Bay St. Louis, MS 39520
3. Biloxi Fire Department  
170 Porter Ave  
Biloxi MS 39530
4. Batesville Fire Department  
105 College St.  
Batesville, MS. 38606

#### Missouri

1. Bonne Terre City Fire Department  
520 N Division Street  
Bonne Terre, MO 63628
2. Kansas City, Mo Fire Department  
635 Woodland Ave. Suite 2100  
Kansas City, MO 64106
3. Trenton Fire Department  
1001 E. 17th  
Trenton, MO 64683
4. Springfield Fire Department  
830 Booneville  
Springfield, MO 65802

#### Montana

1. Missoula Fire Department  
625 E. Pine St.  
Missoula, MT 59802
2. Billings Fire Department  
210 N. 27<sup>th</sup> St  
Billings Montana 59101
3. Kalispell Fire Department  
Kalispell, MT 59901

#### Montanan

4. Helena Fire Department

300 Neill Ave  
Helena, MT 59601

#### Nebraska

1. Lincoln Fire Department  
Lincoln, NE 68508
2. Hastings Fire and Rescue  
Hastings, NE 68901
3. Beatrice Fire Department  
310 Ella Street  
Beatrice, NE 68310
4. Omaha Fire Department  
1516 Jackson St  
Omaha, NE 68102

#### Nevada

1. North Lake Tahoe Fire District  
Incline Vlg, NV 89451
2. Reno Fire Department  
200 Evans Ave.  
Reno, NV 89501
3. Elko Fire Department  
Elko, NV 89801
4. Henderson Fire Department  
240 Water Street  
Henderson, NV 89015

#### New Hampshire

1. Portsmouth Fire Station  
170 Court Street  
Portsmouth, NH 03801
2. Rochester Fire Department  
37 Wakefield Street  
Rochester, NH 03867
3. Claremont Fire Department  
100 Broad St.  
Claremont, NH 03743
4. Pittsfield Fire Department  
33 Catamount Road  
Pittsfield, NH 03263

#### New Jersey

1. Belleville NJ Fire Department

275 Franklin Ave.  
Belleville, NJ 07109

2. Hoboken Fire Department  
Hoboken New Jersey
3. Hackensack Fire Department  
665 Central Avenue  
Hackensack, NJ 07601
4. Springfield Fire Department  
Springfield, New Jersey

#### New Mexico

1. Albuquerque Fire Department  
11510 Sunset Gardens SW  
Albuquerque, NM 87121
2. Clovis Fire Department  
320 Mitchell St.  
Clovis, NM 88101
3. Santa Fe Fire Department  
Central Admin #14 Fire Place  
Santa Fe , NM 87505
4. Las Cruces Fire Department  
201 E. Picacho Ave.  
Las Cruces, NM 88001

#### New York

1. Amityville Fire Department  
55 West Oak Street  
Amityville NY, 11701
2. Ithaca Fire Department  
310 W Green St  
Ithaca, New York 14850-5497
3. Arlington Fire District  
11 Burnett Blvd.  
Poughkeepsie, NY 12603-2038
4. Cobelskill Fire Department  
PO Box 697  
Cobleskill, New York 12043

#### North Carolina

1. Winston-Salem Fire Department  
725 N. Cherry Street,  
Winston-Salem, NC 27101

#### North Carolina

2. Charlotte Fire Department

3. Charlotte North Carolina  
Raleigh Fire Department  
310 W. Martin St.,  
Raleigh, North Carolina 27601
4. Asheboro Fire Department  
401 South Church Street  
Asheboro, NC 27203

## North Dakota

1. Fargo Fire Department  
637 Northern Pacific Avenue N  
Fargo, ND 58102
2. Minot Fire Department  
Minot North Dakota
3. Devils Lake Fire Department  
Devils Lake North Dakota
4. Bismark Fire Department  
1020 East Central Avenue  
Bismarck, ND 58501-1936

## Ohio

1. Oregon Fire Department  
Oregon, Ohio 43604
2. Mantua-Shalersville Fire Dept.  
10303 Stae Route 44  
Mantua, Ohio 44255
3. Bainbridge Fire Department  
17822 Chillicothe Rd  
Chagrin Falls, OH 44023
4. Dayton Fire Department  
300 N. Main Street  
Dayton, OH 45402
5. Vandalia Fire Department  
333 J.E. Bohanan Drive  
Vandalia, OH 45377
6. Chardon Fire Department  
110 S. Hambden St  
Chardon, OH 44024
7. Columbus Division of Fire  
3675 Parsons Avenue  
Columbus, Ohio 43207
8. Piqua Fire Department  
229 W. Water Street  
Piqua OH 45356

## Ohio

9. Mason Fire Department  
6000 Mason-Montgomery Rd.

- Mason, Ohio 45040
10. Concord Twp. Fire Department  
11600 Concord-Hambden Road  
Concord Twp, OH 44077

## Oklahoma

1. Stillwater Fire Department  
1506 S. Main St,  
Stillwater, Oklahoma, 74074.
2. Enid Fire Department  
P.O. Box 1768  
Enid, Oklahoma 73702
3. Oklahoma City Fire Department  
820 NW 5  
Oklahoma City, OK 73106
4. Lawton Fire Department  
103 SW 4th St  
Lawton, OK 73501

## Oregon

1. Ashland Fire Department  
455 Siskiyou Blvd  
Ashland, OR 97520
2. Salem Fire Department  
370 Trade Street SE  
Salem, Oregon 973010
3. Medford Fire Department  
200 South Ivy Lausmann Annex:  
Medford, Oregon 97501
4. Newberg Fire Department  
3100 Middlebrook Dr  
Newberg, OR. 97132

## Pennsylvania

1. Greenwalds Fire Rescue  
2500 Focht Avenue  
Allentown, PA 18104
2. Pittsburg Fire Department  
200 Ross Street  
Pittsburgh, PA 15219
3. Coatesville Fire Department  
#1 City Hall Place  
Coatesville, Pa. 19320

## Pennsylvania

4. Reading Fire Department

815 Washington Street  
Reading, PA 19601-3690

#### Rhode Island

1. West Greenwich Fire Department  
210 Plain Rd.  
West Greenwich, RI 02817
2. Jamestown Fire Department  
50 Narragansett Ave.  
Jamestown, Rhode Island 02835
3. Middletown Fire Department  
239 Wyatt Road  
Middletown, RI 02842
4. City of Cranston Fire Department  
301 Pontiac Ave  
Cranston RI 02910

#### South Carolina

1. Myrtle Beach Fire Department  
921 B Oak Street  
Myrtle Beach, SC 29578
2. Georgetown Fire Department  
1405 Prince St  
Georgetown, South Carolina 29440
3. Charleston Fire Department  
46-1/2 Wentworth Street  
Charleston, SC 29401
4. Seneca Fire Department  
221 East North First Street  
Seneca SC 29679

#### South Dakota

1. Yankton Fire Department  
107 W. 5th  
Yankton, SD 57078
2. Pierce Fire Department  
215 West Dakota Avenue  
Pierre, South Dakota 57501
3. Madison Fire Department  
Address: 200 SE 3rd Street  
Madison SD
4. Fort Pierre Fire Department  
305 N Deadwood Ave  
Fort Pierre SD 57532

#### Tennessee

1. Knoxville Fire Department

400 Main St,  
Knoxville, TN 37902

2. Memphis Fire Department  
65 South Front Street  
Memphis, TN 38103
3. Brentwood Fire Department  
PO Box 788  
Brentwood, TN 37024
4. Chattanooga Fire Department  
910 Wisdom Street  
Chattanooga, TN 37406

#### Texas

1. Austin Fire Department  
P.O. Box 1088,  
Austin, TX 78767
2. Waco Fire Department  
300 Austin Ave  
Waco, Texas 76702
3. San Antonio Fire Department  
PO Box 839966  
San Antonio, Texas 78283
4. Abilene Fire Department  
250 Grape St.  
Abilene, TX 79601

#### Utah

1. Tooele City Fire Department  
910 N Main street  
Tooele, Utah
2. Salt Lake City Fire  
Salt Lake City, UT 84111
3. Murray City Fire Department  
40 East 4800 South  
Murray UT 84107
4. Ogden Fire Department  
2186 Lincoln Avenue  
Ogden, Utah 84401

#### Vermont

1. Greenfield Fire Department  
412 Main Street  
Greenfield, VT 5301

#### Vermont

2. Town of Williston Fire Department

- 7900 Williston Road  
Williston VT 05495
3. Barre City Fire Department  
5 Fourth Street  
Barre, VT 05641
  4. St. Johnsbury Fire Department  
1187 Main Street, Suite 3  
St. Johnsbury, VT 05819

## Virginia

1. Chesapeake Fire Department  
304 Albemarle Drive  
Chesapeake, VA 23322
2. Hampton Fire Department  
22 Lincoln St.  
6th Floor City Hall  
Hampton, VA 23669
3. Henrico County Division of Fire  
Parham and Hungary Springs Roads  
Richmond, VA 23273
4. Virginia Beach Fire Department  
2408 Courthouse Dr  
Municipal Center, Bldg. 21  
Virginia Beach, VA 23456

## Washington

1. West Valley Fire Rescue  
10000 Zier Road  
Yakima, WA 98908
2. Edmonds Fire Department  
121 5<sup>th</sup> Ave N  
Edmonds, WA 98020
3. Seattle Fire Department  
301 Second Avenue South  
Seattle, WA 98104
4. Spokane Fire Department  
44 West Riverside Rd  
Spokane, WA 99201

## West Virginia

1. Bridgeport Fire Department  
131 West Main St  
Bridgeport, WV 26330

## West Virginia

2. Princeton City Fire Department

- 100 Courthouse Road  
Princeton, WV 24740
3. Morgantown Fire Department  
Morgantown WV
  4. Charlestown Fire Department  
808 Virginia Street  
Charleston, WV 25302

## Wisconsin

1. City of Madison Fire Department  
325 w Johnson St  
Madison, WI 53703
2. Kenosha Fire Department  
Administration 625 52nd Street  
Kenosha, Wisconsin 53140
3. Oshkosh Fire Department  
101 Court Street  
Oshkosh, Wisconsin 54901
4. Green Bay Fire Department  
501 S Washington St  
Green Bay, WI 54301-4218

## Wyoming

1. Sheridan Fire Department  
151 South Scott Street  
Sheridan, WY 82801
2. Cheyenne Fire Department  
Cheyenne, WY 82001
3. Laramie Fire Department  
PO Box C  
Laramie, WY 82073
4. Rawlins Fire Department  
320 W. Walnut  
Rawlins, WY 82301